

**What is Claimed is:**

1. A method of forming a reinforced carton blank, comprising:
  - moving at least one strip of reinforcing material along a processing path;
  - extruding a foamed adhesive onto the at least one strip of reinforcing material in a desired pattern;
  - moving a carton material into registration with the at least one strip of reinforcing material; and
  - forming the carton blank from the attached carton material and at least one strip of reinforcing material.
2. The method of claim 1, wherein the foamed adhesive is a water-based emulsion.
3. The method of claim 2, wherein the foamed adhesive emulsion is selected from the group consisting essentially of ethylene vinyl acetate and polyvinyl acetate emulsions.
4. The method of claim 1, wherein the foamed adhesive is extruded in a discontinuous pattern.

5. The method of claim 1, wherein moving the carton material into registration with the at least one strip of reinforcing material includes feeding the carton material into contact with the at least one strip of reinforcing material and urging the carton material and at least one strip of reinforcing material together to set the adhesive for holding the carton material and at least one strip of reinforcing material together.
6. The method of claim 1, wherein urging the paperboard web and at least one strip of reinforcing material together includes passing the paperboard web and at least one strip of reinforcing material through compression rollers.
7. A method of forming reinforced carton blanks, comprising:
  - moving a reinforcing material and a carton material along a processing path toward engagement with each other;
  - extruding a foamed adhesive in a desired pattern between the reinforcing material and the carton material;
  - adhering the reinforcing material and carton material together to form a laminated reinforced carton material; and
  - cutting the carton blanks from the laminated reinforced carton material as it continues along the processing path.
8. The method of claim 7, wherein the foamed adhesive is a water-based emulsion.

9. The method of claim 8, wherein the foamed adhesive emulsion is selected from the group consisting essentially of ethylene vinyl acetate and polyvinyl acetate emulsions.
10. The method of claim 7, wherein the foamed adhesive is extruded in a discontinuous pattern.
11. A system for producing cartons, comprising:
  - a supply of a carton material along a processing path;
  - a foamed adhesive applicator station positioned along the processing path for applying an extruded foamed adhesive to the carton material in a desired pattern; and
  - a laminating station downstream from the foamed adhesive applicator station and adapted to engage and urge the carton material into contact with folded portions of the carton material or with reinforcing material strips being applied to carton material to form a laminated carton material and/or folded and enclosed cartons.
12. The system of claim 11, wherein the laminating station includes at least one pair of compression rolls or belts.

13. The system of claim 11 and further comprising a cutting station for forming the carton blanks from the laminated material.
14. The system of claim 11, further including a foaming station fluidly connected to the foamed adhesive applicator station for supplying the foamed adhesive to the extrusion head station.
15. The system of claim 14, wherein the foaming station includes a storage tank supplying an adhesive to a foamer.
16. The system of claim 11, wherein the foamed adhesive is a water-based emulsion.
17. The system of claim 16, wherein the foamed adhesive emulsion is selected from the group consisting essentially of ethylene vinyl acetate and polyvinyl acetate emulsions.
18. A system for producing reinforced carton blanks comprising:
  - a supply of reinforcing material strips fed along a processing path toward engagement with a carton material;
  - a foaming station fluidly connected to a foamed adhesive applicator station for applying a foamed adhesive to the reinforcing material strips;

a laminating station downstream from the foamed adhesive applicator station adapted to engage and urge the reinforcing material strips and a carton material into contact so that the strips and carton material are held together to form a laminated material; and  
a cutting station for forming the carton blanks from the laminated material.

19. The system of claim 18, wherein the foaming station includes a storage tank supplying an adhesive to a foamer.
20. The system of claim 18, wherein the foamed adhesive is a water-based emulsion.
21. The system of claim 20, wherein the foamed adhesive emulsion is selected from the group consisting essentially of ethylene vinyl acetate and polyvinyl acetate emulsions.
22. A system for forming, folded and glued cartons as the cartons are moved along a processing path through a product packaging line, comprising:  
a first folder for engaging and folding a first series of carton flaps to a closed position;

an adhesive applicator station having at least one extrusion head for applying an extruded foamed adhesive in a desired pattern to at least one carton flap;

a second folder for engaging and folding a second series of carton flaps to a closed position; and

a laminating station downstream from the second folder for applying a compression force to the folded carton flaps to set the foamed adhesive applied to the carton flaps.